



SPEC® CINT2006 Result

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Cisco Systems

Cisco UCS C460 M4 (Intel Xeon E7-4809 v2, 1.90 GHz)

SPECint®_rate2006 = **NC**

SPECint_rate_base2006 = **NC**

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: May-2014

Hardware Availability: Apr-2014

Software Availability: Sep-2013

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Cisco or Intel.

- Copies
- 400.perlbench
- 401.bzip2
- 403.gcc
- 429.mcf
- 445.gobmk
- 456.hmmer
- 458.sjeng
- 462.libquantum
- 464.h264ref
- 471.omnetpp
- 473.astar
- 483.xalancbmk

Non-Compliant

Hardware

CPU Name: Intel Xeon E7-4809 v2
 CPU Characteristics: 1900
 CPU MHz: Integrated
 FPU: 24 cores, 4 chips, 6 cores/chip, 2 threads/core
 CPU(s) enabled: 1,2,3,4 Chips
 CPU(s) orderable: 32 KB I + 32 KB D on chip per core
 Primary Cache: 256 KB I+D on chip per core
 Secondary Cache: 12 MB I+D on chip per chip
 L3 Cache: None
 Other Cache:

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 2.6.32-358.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit

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Memory: 512 GB (64 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL11)
Disk Subsystem: 1 x 300 GB SAS SATA 15K RPM
Other Hardware: None

Other Software: Mellanox SmartHeap V10.0

Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
400.perlbench	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
401.bzip2	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
403.gcc	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
429.mcf	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
445.gobmk	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
456.hmmer	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
458.sjeng	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
462.libquantum	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
464.h264ref	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
471.omnetpp	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
473.astar	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		
483.xalancbmk	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC		

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"



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Platform Notes

```

CPU performance set to HPC
Power Technology set to Custom
CPU Power State C6 set to Enabled
CPU Power State C1 Enhanced set to Disabled
Package C State Limit set to C0/C1 State
Energy Performance policy set to Performance
Memory RAS configuration set to Maximum Performance
DRAM Clock Throttling Set to Performance
LV DDR Mode set to Performance-mode
DRAM Refresh Rate Set to 1x
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-11-17 # $ e86d102572650a6e4d596a3cee98f191
running on msc-sbrhel Thu Mar 13 15:22:06 2014

```

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

```

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E7-4809 v2 @ 1.90GHz
4 "physical id's (chips)
48 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
cpu cores : 6
siblings : 12
physical 0: cores 0 1 2 3 4 5
physical 1: cores 0 1 2 3 4 5
physical 2: cores 0 1 2 3 4 5
physical 3: cores 0 1 2 3 4 5
cache size : 12288 KB

```

```

From /proc/meminfo
MemTotal:      529143500 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

```

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)

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Platform Notes (Continued)

```

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux msc-sbrhel 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 1 14:51

SPEC is set to: /opt/cpu2006-1.2
Filesystem      Type      Size      Used      Avail      Use%      Mounted on
/dev/sdal        ext4      275G      14G      249G      5%      /

Additional information from dmidecode:
BIOS Cisco Systems, Inc. C460M4.1.5.5.13.012720142211 01/27/2014
Memory:
64x      8 GB
64x 0xCE00 M3911K70QB1K0 8 GB 1333 MHz 2 rank
32x NO DIMM NO DIMM

(End of data from sysinfo program)

```

General Notes

```

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH="/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64:/opt/cpu2006-1.2/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RedHat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

Submitted_by: "Sheshgiri I (shei)" <shei@cisco.com>
Submitted: Wed May 28 03:16:44 EDT 2014

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Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_X64 -DSPEC_CPU_LINUX_X64

401.bzip2: -DSPEC_CPU_LINUX

456.hmmer: -DSPEC_CPU_LP64

458.sjeng: -DSPEC_CPU_LP64

462.libquantum: -DSPEC_CPU_LINUX

483.galambm: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32 -ansi-alias

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Peak Optimization Flags (Continued)

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs

456.hmmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll14 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/sh -lsmartheap

473.a2ar: basepeak = yes

485.xalancomk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revB.html>

You can also download the XML flags source files using the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revB.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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